

4.4 AIR QUALITY

4.4.1 ALTERNATIVE A – PROPOSED CASINO AND HOTEL

INTRODUCTION

Alternative A would be in compliance with the Federal Clean Air Act (42 USC § 7401 *et seq*) based on the following air quality analysis. The analysis was prepared in coordination with the Southeast Wisconsin Regional Planning Commission (SEWRPC), U.S. Environmental Protection Agency Region 5 (USEPA) and the Wisconsin Department of Natural Resources Bureau of Air Management (WDNR), who each have jurisdiction or special expertise in the area of air quality.

Alternative A would be constructed in the USEPA-designated Milwaukee-Racine moderate ozone non-attainment area (non-attainment area). Thus, the implementing Federal agencies must address in this environmental assessment the need for:

1. *Transportation Conformity Analysis* - 40 CFR 93, subpart A, and
2. *General Conformity Analysis* - 40 CFR 93, subpart B

TRANSPORTATION CONFORMITY ANALYSIS

A transportation conformity analysis is unnecessary for Alternative A because transportation conformity determinations are only applicable to the “adoption, acceptance, approval or support” of a transportation plan, a transportation plan amendment, a transportation improvement plan, or a transportation improvement plan amendment (See 40 CFR 93.102 (1)). These terms are defined as follows:

Transportation plan means the official intermodal metropolitan plan that is developed through the metropolitan planning process for the metropolitan planning area, developed pursuant to 23 CFR part 450. In Kenosha County, the regional planning entity is the Southeastern Wisconsin Regional Planning Commission (SEWRPC).

Transportation improvement plan (TIP) means a staged, multi-year, intermodal program of transportation projects covering a metropolitan planning area which is consistent with the metropolitan transportation plan, and developed pursuant to 23 CFR part 450. In Kenosha County, the regional planning entity is the Southeastern Wisconsin Regional Planning Commission (SEWRPC).

As these definitions make clear, the type of activities requiring a transportation conformity determination are long-range regional transportation plans and shorter-term improvements to such plans. Alternative A simply does not necessitate the creation or alteration of such plans. In this regard, Alternative A includes nine specific recommended improvements. Land Strategies, Inc.

made the recommendations in their January 11, 2005, report, based on traffic engineering standards and the criteria stated in the WisDOT Traffic Impact Analysis Guidelines.

Further, individual projects such as Alternative A are not subject to special transportation conformity determinations. Rather, they are specifically exempted:

Conformity determinations are not required under this subpart for individual projects that are not FHWA/FHA funded. However, 40 CFR § 93.121 applies to such projects¹ if they are regionally significant.

Mobile emissions associated with individual projects such as Alternative A are included and accommodated in the regional conformity determination completed by the area's Metropolitan Planning Organization. For the Kenosha area, that would be SEWRPC. SEWRPC's conformity determination allows for a reasonable growth rate in vehicle traffic for Kenosha County and accommodates for changes in land use patterns:

The results of analyses of these scenarios indicated that the future annual growth in vehicle-miles of travel within the Region may be expected to range from about 1.0 percent to 2.0 percent. The analyses indicated that alternative land use patterns and transit and highway improvements may be expected to have little impact on vehicle-miles of travel, accounting for less than 0.1 percent variation in annual growth. Variations in regional economic growth and substantial changes in the perceived cost of automobile use may be expected to account each for about 0.5 percent variation in growth annually (SEWRPC, 2002).

Based on the foregoing, Alternative A would not require a transportation conformity determination.

GENERAL CONFORMITY DETERMINATION

Operational Emissions

A general conformity determination by the BIA is required for Alternative A prior to the Federal trust acquisition of the site. The general conformity determination is based on a review of the incremental emissions from the trips to be generated by Alternative A, and a determination of whether or not the emissions would fall within the budget of the state's approved attainment plan.

¹ "Project means a highway project or transit project." 40 C.F.R. § 93.101. As explained above, Alternative A does not entail any highway or transit projects.

The WDNR (Bruss, pers. comm., 2005; Friedlander, pers. comm., 2005) was consulted regarding its review of the general conformity issues related to the Proposed Project. Based on the WDNR consultation, evaluation of emissions from each project phase using annual visitor and employment projections from the economic impact study (**Appendix J**) was conducted. The detailed analysis includes estimates of emissions from each separate project operations and construction phase.

Because Kenosha County is designated as a moderate ozone non-attainment area under the new 8-hour ozone standard, the annual emission rate threshold for incremental VOC and NO_x emissions is 100 tons/year (NR 489.03(2)(a)). Because the 1-hour ozone standard will be withdrawn on June 15, 2005, and the Proposed Alternative will be constructed in 2007, no evaluation of the current 1-hour standard severe non-attainment emissions threshold of 25 ton/year VOC and NO_x annual emissions threshold is required. Annual VOC and NO_x emissions for Alternative A are based on the annual visitation provided in the traffic study (**Appendix K**) and summarized in **Table 4.4-1**. Estimated annual emissions of VOC and NO_x are provided in **Table 4.4-2**.

TABLE 4.4-1
PROJECTED ANNUAL EMPLOYEES/VISITORS¹

Project Phase	First Full Operation Year	Employees ¹	Total ² Vehicles per Year	Overnight Visitors	Day Trip Visitors	Total Visitors
Temporary	2007	1,109	247,280	150,000	854,000	1,008,000
Phase I	2008	2,751	573,360	150,000	3,005,000	3,155,000
Phase II	2010	3,337	744,205	348,000	3,449,000	3,797,000
Phase III	2014	3,837 ³	855,705	417,600 ⁴	4,138,800 ⁴	4,556,400 ⁴

NOTES:

¹Economic Research Associates, Economic Impact Study, p. 31, April 4, 2005

²Total annual employees were calculated assuming 20% weekend/holiday employment, 80% weekday. Assume one passenger per car.

³Phase II plus 500 employees

⁴Phase II plus 20%

SOURCE: RSV Engineering, 2005; AES, 2005

Bus travel for visitors was evaluated assuming 50 buses per day (utilizing the existing 50 bus parking spots present at the DGP facility) and an occupancy of 65 visitors per bus. For the bus travel scenario, passenger car travel was reduced by the number of visitors projected to travel by bus.

Based on these projected incremental VOC and NO_x levels, the 100 ton/year NR489.03(2)(a) threshold will be exceeded, and mitigation is required for Alternative A. Because VOC and NO_x emissions factors for vehicles will decrease substantially in future years, the incremental increase

in VOC and NOx emissions for this project in 2017 will be less than those calculated for the project build year.

TABLE 4.4-2
ANNUAL VOC AND NOX EMISSIONS

Project Phase	VOC (tons/year)	NOx (tons/year)
Temporary	2.16	21.8
Phase I	24.1	107
Phase II	25.5	107
Phase III	22.3	75.3

SOURCE: RSV Engineering, 2005; AES, 2005

Construction Emissions

Construction activities will also generate VOC and NOx emissions during the active building phases of the project. Construction emissions will precede operational emissions from Alternative A after build-out. As such, they will not contribute to annual emissions projected from vehicle traffic associated with the fully built facility. The majority of construction VOC and NOx emissions have been assumed to result from the use of heavy construction equipment on-site during the earth moving phase of construction. Construction emissions were analyzed for construction of each major phase, as described above. Assumptions utilized in the emissions calculations are provided in Table 11 and Table 12 of the Air Quality Impact Analysis report (**Appendix L**).

Each phase of construction was evaluated separately with respect to VOC and NOx annual emissions. Construction activities that were evaluated for VOC and NOx impact included the heavy construction associated with site clearing and preparation, trucking for delivery of building materials, use of heavy equipment during building construction (cranes for erection of building components) and construction employee travel.

VOC and NOx emissions from Phase I and II construction activities are summarized in **Table 4.4-3**. Phase III construction emissions are assumed to be equivalent to Phase II emissions.

TABLE 4.4-3
ESTIMATED VOC AND NOX EMISSIONS DUE TO CONSTRUCTION

Phase Construction	VOC (tons/year)	NOx(tons/year)
Phase I	3.58	21.6
Phase II	2.55	16.8

SOURCE: RSV Engineering, 2005

These estimates show that the 100 ton/year NR489.03(2)(a) threshold will be exceeded for combined construction and operational VOC and NO_x emissions from the Proposed Alternative. Mitigation is required.

Combined Construction and Operational Emissions

The results above indicate that intermediate project phases (Phases I and II) produce NO_x emissions in excess of the 100 tons per year threshold. This result is likely due to the conservative nature of the assumptions used in this analysis. Mitigation is required.

AMBIENT AIR QUALITY STANDARDS

Alternative A is also in compliance with the FCAA with regard to ambient air quality standards. The original DGP air quality analysis, using the 1989 versions of emission factor and dispersion models, substantiates this estimate of impact for Alternative A for the following reasons:

1. Roadway and facility entrance improvements to accommodate peak attendance DGP facility traffic were made, and were re-evaluated with respect to gaming facility traffic impacts (**Appendix K**). This study included current adjacent roadway traffic levels, and projected future traffic levels.
2. The DGP air quality analysis, and roadway improvements added as part of the air permit approval process, were developed to maintain ambient air quality standards under peak traffic conditions of 6,059 vehicle trips per hour. By comparison, the proposed gaming facility peak traffic of 2,815 vehicle trips per hour is substantially less, making the facility exits and adjacent roadway systems over-designed.
3. The year 2000 predicted maximum CO impacts from peak attendance, from the DGP air quality analysis, are lower than those for the year 1990, due to decreasing emissions from newer vehicles. This trend will continue over time, since the major contributor to ambient air quality, CO, and other vehicle emissions, is slow moving entering and exiting vehicles. Because peak traffic levels from the proposed gaming facility are lower than those used to design exits and roadways for DGP, worst case ambient air quality impacts from the gaming facility will be less than those from DGP.

USEPA has continually upgraded the air emissions and dispersion models utilized in the analysis of mobile source impacts. The original DGP permit analysis utilized the MOBILE 3 emissions model, and recent permits for mobile sources have been completed utilizing the MOBILE 6 version of this model. Because of the conservative assumptions and methodologies utilized in the 1989 air quality modeling, and the decreasing trend in emission rates as required by USEPA for

new vehicles, it is expected that the ambient air quality standards will be maintained for Alternative A, and the predicted impact may continue to decrease over time.

However, the USEPA recommends in its letter that additional micro scale air quality analyses for carbon monoxide (CO) be performed using USEPA's recently approved models for emission factor and dispersion prior to construction of Alternative A. This modeling was conducted as described below.

CO MICROSCALE AIR QUALITY ANALYSIS

Microscale air quality analysis was conducted to compare Alternative A to the no-action Alternative E. The analysis consisted of quantifying CO ambient air quality impacts from the associated motor vehicle tailpipe emissions. The two scenarios evaluated include Alternative E (the No Action Alternative) and Alternative A. The No Action Alternative consisted of quantifying CO concentrations from the current greyhound racetrack using current projected traffic associated with full use. In Alternative A, impacts from vehicle traffic associated with the completed Phase III project were used.

Five intersections were modeled to quantify ambient CO concentrations:

- 1) State Highway 158 and the main access road;
- 2) State Highway 158 and 104th Avenue;
- 3) State Highway 158 and 88th Avenue (County Highway H);
- 4) 60th Street (County Highway K) and 104th Avenue; and
- 5) 104th Avenue and the southern access road.

The dispersion modeling techniques used are summarized below:

- Traffic volumes are based upon the site-specific traffic reports prepared by Land Strategies, Inc.
- Emission factors were calculated using the Mobile 6 model.
- CO concentrations were calculated using CAL3QHC dispersion model.
- Worst-case 1-hour meteorology was used with the CAL3QHC dispersion model.

The simulation of motor vehicle tailpipe emissions, transport, and dispersion requires the analyst to digitally represent the roadway characteristics where concentrations are to be calculated, including physical dimensions, traffic volumes, traffic movement, emission characteristics, transport characteristics, and location. Some of these parameters are common to all intersections in the analysis, while others are specific to individual intersections.

Traffic volumes are based upon the site-specific traffic reports prepared by Land Strategies, Inc. Peak 1-hour morning and afternoon traffic volumes for each directional movement were provided, of which peak afternoon traffic volumes were identified as worst-case and therefore used in the analyses.

In determining the maximum model-predicted CO concentrations the following assumptions were made about the traffic. The 1-hour CO concentrations were determined using the peak 1-hour traffic volumes were used. The 8-hour CO concentrations were determined using peak 8-hour average traffic volumes, when available. This information was available for two intersections: STH158 and the main access road, and 104th and the southern access road. In the absence of peak 8-hour traffic volumes, peak 1-hour traffic volumes were conservatively assumed to occur for an 8-hour period. Peak 8-hour traffic volumes are approximately 85% of the peak 1-hour traffic volumes.

All queue links were modeled with the following specifications provided by the traffic consultant. All stoplights are fully actuated. Signal cycle lengths and amount of red time were identified from the traffic report, on an intersection-specific basis. Saturation rates are 1900 vehicles per lane per hour. A two (2) second vehicle clearance time was used. All free-flow links were modeled with mixing zone widths set equal to the lane width plus 10 feet on each side to account for turbulence for free flow links.

CAL3QHC was used to model the impacts from all intersections. Modeling parameters common to all intersections are as follows:

- Pollutant concentrations are calculated at each 1-degree along a 360-degree arc.
- A worst case wind speed of 1 meter/second and a PG atmospheric stability class of E are assumed.
- The surface roughness length is 74 cm.
- Worst-case progression at each intersection is used.
- All source heights are set to 0 meters above ground.
- Concentrations are calculated at a receptor height equal to 0 meters above ground.
- All roads are assumed to be non-elevated (0 meters).

The results of the CO intersection hot spot modeling analysis are presented in **Table 4.4-4**. As shown in **Table 4.4-4**, all intersections for both the No Action Alternative and Alternative A are predicted to be in compliance with the CO NAAQS. CO emissions for 1-hour, 8-hour and No-Project are shown for each intersection. The 1-hour maximum predicted concentrations were based upon worst-case meteorological and emission assumptions. The 8-hour model-predicted values were determined by multiplying the 1-hour value by a 0.6 adjustment factor to account for the variation in meteorological conditions over an 8-hour period, as compared to a 1-hour period. The highest second-high 1-hour and 8-hour CO concentrations were used to demonstrate

TABLE 4.4-4
CO MICROSCALE ANALYSIS RESULTS

Intersection	Action	Avg. Period	Max Model- Predicted Conc. (ppm)	Bkgrd Conc. (ppm)	Total Predicted Conc. (ppm)	NAAQS (ppm)	% NAAQS
<i>STH 158 and Main Access Road</i>	No Action	1-hour	1.50	4.7	6.20	35	18
		8-hour	0.83	2.9	3.73	9	41
	Proposed 2007	1-hour	7.40	4.7	12.10	35	35
		8-hour	4.82	2.9	7.72	9	86
	Proposed 2017	1-hour	6.80	4.7	11.50	35	33
		8 hour	4.23	2.9	7.13	9	79
<i>STH 158 and 104th</i>	No Action	1-hour	2.30	4.7	7.00	35	20
		8-hour	1.18	2.9	4.08	9	45
	Proposed 2007	1-hour	10.70	4.7	15.40	35	44
		8-hour	5.77	2.9	8.67	9	96
	Proposed 2017	1-hour	8.50	4.7	13.20	35	38
		8-hour	4.65	2.9	7.55	9	84
<i>STH 158 and 88th Avenue</i>	No Action	1-hour	2.00	4.7	6.70	35	19
		8-hour	1.20	2.9	4.10	9	46
	Proposed 2007	1-hour	3.70	4.7	8.40	35	24
		8-hour	2.08	2.9	4.98	9	55
	Proposed 2017	1-hour	2.80	4.7	7.50	35	21
		8-hour	1.55	2.9	4.45	9	49
<i>104th and 60th Street</i>	No Action	1-hour	1.30	4.7	6.00	35	17
		8-hour	0.92	2.9	3.82	9	42
	Proposed 2007	1-hour	2.30	4.7	7.00	35	20
		8-hour	1.28	2.9	4.18	9	46
	Proposed 2017	1-hour	2.50	4.7	7.20	35	21
		8-hour	1.52	2.9	4.42	9	49
<i>104th and Southern Access Road</i>	No Action	Intersection Not Present					
	Proposed 2007	1-hour	12.1	4.7	16.80	35	48
		8-hour	5.12	2.9	8.02	9	89
	Proposed 2017	1-hour	8.1	4.7	12.80	35	37
		8-hour	4.24	2.9	7.14	9	79

SOURCE: RSV Engineering, 2005

compliance with the CO standards. Background concentrations were obtained from WDNR for the project area. The national ambient air quality standard for CO is 35 ppm for a 1-hour period and 9 ppm for an 8-hour period.

CONSTRUCTION IMPACTS

There is the potential for increased fugitive dust in the air during Alternative A construction activities as a result of grading and excavation activities, and the hauling of earth and gravel materials over unpaved construction roads. These impacts would be short term (less than three months) and localized, and dependent on weather conditions during the construction period. Mitigation for construction related air impacts is specified in **Section 5**.

4.4.2 ALTERNATIVE B – REDUCED INTENSITY ALTERNATIVE

INTRODUCTION

Alternative B would also be in compliance with the Clean Air Act (42 U.S.C. § 7401 *et seq.*), based on the following air quality analysis. The analysis was prepared in coordination with the SEWRPC, USEPA and WDNR. Alternative B would be constructed in the USEPA-designated Milwaukee-Racine moderate ozone non-attainment area (non-attainment area). Thus, the implementing Federal agencies must address in this environmental assessment the need for Transportation Conformity Analysis and General Conformity Analysis.

TRANSPORTATION CONFORMITY ANALYSIS

As with Alternative A, a transportation conformity analysis is unnecessary for Alternative B. Transportation conformity determinations are only applicable to the “adoption, acceptance, approval or support” of a transportation plan, a transportation plan amendment, a transportation improvement plan, or a transportation improvement plan amendment (See 40 CFR 93.102 (1)). Please see transportation conformity analysis discussion under Alternative A for more information.

GENERAL CONFORMITY DETERMINATION

A general conformity determination is required for Alternative B prior to the Federal trust acquisition of the site. Worst-case hourly traffic exit conditions, which have the greatest impact on air quality, would be less as a result of Alternative B operations than would occur for an equivalent amount of patronage under existing conditions or the No-Action Alternative (Alternative E). This is the case because worst-case traffic conditions and roadway modifications completed for the existing DGP assumed that the vehicle capacity of the current parking lot would leave the facility over a short period of time at the end of that day’s scheduled races. In contrast to this, Alternative B patronage, like Alternative A, would be spread over a 24-hour period each day and fewer patrons are expected to leave at the end of scheduled greyhound

events. The No-Action alternative would have a peak VOC emission of 0.15 tons per day (tpd) or 54.75 tons per year (tpy) and peak NOx emission of 0.7 tpd.

Based on these projected incremental VOC and NOx levels for the worst-case conditions, the 100 ton/year NR489.03(2)(a) threshold will not be exceeded under Alternative B. Because VOC and NOx emissions factors for vehicles will decrease substantially in future years, the incremental increase in VOC and NOx emissions for this project in 2017 will be less than those calculated for the project build year.

Air quality control jurisdiction for the DGP site under Alternative B will shift from State of Wisconsin to Federal and Tribal jurisdiction following the trust transfer. Alternative B (under Tribal jurisdiction) would operate in compliance with the FCAA and consistent with the Wisconsin SIP to reduce ozone levels by operating in a manner consistent with the Federal and state plans. This would include voluntary compliance with state indirect source permitting regulations that regulate vehicle emissions from parking lot traffic.

Construction activities will also generate VOC and NOx emissions during the active building phases of the project. Construction emissions will precede operational emissions from Alternative B after build-out. As such, they will not contribute to annual emissions projected from vehicle traffic associated with the fully built facility. The majority of construction VOC and NOx emissions have been assumed to result from the use of heavy construction equipment on-site during the earth-moving phase of construction. These emissions are estimated in **Table 4.4-3**. Assumptions utilized in the emissions calculations are provided in the table footnotes.

These estimates show that the 100 ton/year NR489.03(2)(a) threshold will not be exceeded for construction VOC and NOx emissions from Alternative B.

AMBIENT AIR QUALITY STANDARDS

Alternative B is also in compliance with the Clean Air Act with regard to ambient air quality standards. The original DGP air quality analysis, using the 1989 versions of emission factor and dispersion models, substantiates the estimate of impact for Alternative B.

CO MICROSCALE AIR QUALITY ANALYSIS

The year 2000 predicted maximum CO impacts from peak attendance, from the DGP air quality analysis, are lower than those for the year 1990, due to decreasing emissions from newer vehicles. This trend will continue over time, since the major contributor to ambient air quality, CO, and other vehicle emissions, is slow moving entering and exiting vehicles. Because peak traffic levels from the Alternative B gaming facility are lower than those used to design exits and roadways for DGP, worst case ambient air quality impacts from the gaming facility will be less than those from the DGP.

4.4.3 ALTERNATIVE C – KESHENA SITE ALTERNATIVE

INTRODUCTION

Alternative C would also be in compliance with the Clean Air Act (42 U.S.C. § 7401 *et seq.*), based on the following air quality analysis. The analysis was prepared in coordination with the USEPA and WDNR. Alternative C would be constructed in the USEPA-designated Menominee County as an attainment area for all criteria pollutants.

TRANSPORTATION CONFORMITY ANALYSIS

As with Alternative A, a transportation conformity analysis is unnecessary for Alternative C because transportation conformity determinations are only applicable to the “adoption, acceptance, approval or support” of a transportation plan, a transportation plan amendment, a transportation improvement plan, or a transportation improvement plan amendment (See 40 CFR 93.102 (1)). Please see transportation conformity analysis discussion under Alternative A for more information.

GENERAL CONFORMITY DETERMINATION

The conformity regulations apply to a proposed Federal action that would cause emissions of criteria air pollutants above certain levels to occur in locations designated as non-attainment or maintenance areas for the emitted pollutants. If a Federal action occurs in a location designated as attainment or unclassified then the general conformity regulation does not apply to the project. A general conformity determination is not required for Alternative C because Menominee County is in attainment for all criteria pollutants.

CO MICROSCALE AIR QUALITY ANALYSIS

Air quality of the Keshena site falls within Federal and Tribal jurisdiction. Under Tribal jurisdiction, Alternative C would operate in compliance with the Clean Air Act. As discussed in **Section 3.4**, Menominee County is in Federal attainment for all criteria pollutants, so a general conformity determination is not required. In addition, roadways are operating well under capacity, approximately 690 passenger cars per hour (pc/h). Capacity of the two-lane highway is 1,700 pc/h for each direction (Highway Capacity Manual, 2000). As discussed in **Section 4.8**, the trips generated by Alternative C would increase traffic volumes through the project area, but as traffic volumes are low the trips generated would have little effect on the roadway capacity and ability to maintain acceptable LOS standards. No signalized intersections are present within the vicinity of the project site and LOS would not be reduced along regional roadways. Therefore, Alternative C would not meet the criteria which triggers the preparation of a CO hotspot analysis. Alternative C would result in a less than significant impact to regional air quality.

4.4.4 ALTERNATIVE D – HOTEL-CONFERENCE CENTER AND RECREATIONAL DEVELOPMENT

INTRODUCTION

Alternative D would also be in compliance with the Clean Air Act (42 U.S.C. § 7401 *et seq.*), based on the following air quality analysis. The analysis was prepared in coordination with the SEWRPC, USEPA and WDNR.

Alternative D would be constructed in the USEPA-designated Milwaukee-Racine moderate ozone non-attainment area (non-attainment area). Thus, the implementing Federal agencies must address in this environmental assessment the need for Transportation Conformity Analysis and General Conformity Analysis.

TRANSPORTATION CONFORMITY ANALYSIS

As with Alternative A, a transportation conformity analysis is unnecessary for Alternative D. Transportation conformity determinations are only applicable to the “adoption, acceptance, approval or support” of a transportation plan, a transportation plan amendment, a transportation improvement plan, or a transportation improvement plan amendment (See 40 CFR 93.102 (1)). Please see transportation conformity analysis discussion under Alternative A for more information.

GENERAL CONFORMITY DETERMINATION

A general conformity determination is required for Alternative D. Worst-case hourly traffic exit conditions, which have the greatest impact on air quality, would be less as a result of Alternative D operations than would occur for an equivalent amount of patronage under existing conditions or the No Action Alternative. This is the case because worst case traffic conditions and roadway modifications completed for the existing DGP assumed that the vehicle capacity of the current parking lot would leave the facility over a short period of time at the end of that day’s scheduled races. In contrast to this, Alternative D patronage, like Alternative A, would be spread over a 24-hour period each day and fewer patrons are expected to leave at the end of scheduled greyhound events. The No Action Alternative would have a peak VOC emission of 0.15 tons per day (tpd) or 54.75 tons per year (tpy) and peak NOx emission of 0.7 tpd.

Based on these projected incremental VOC and NOx levels for the worst-case conditions, the 100 ton/year NR489.03(2)(a) threshold will not be exceeded under Alternative D. Because VOC and NOx emissions factors for vehicles will decrease substantially in future years, the incremental increase in VOC and NOx emissions for this project in 2017 will be less than those calculated for the project build year.

Construction activities will also generate VOC and NO_x emissions during the active building phases of the project. Construction emissions will precede operational emissions from Alternative D after build-out. As such, they will not contribute to annual emissions projected from vehicle traffic associated with the fully built facility. The majority of construction VOC and NO_x emissions have been assumed to result from the use of heavy construction equipment on-site during the earth-moving phase of construction. These emissions have been estimated in **Table 4.4-3**.

These estimates show that the 100 ton/year NR489.03(2)(a) threshold will not be exceeded for construction VOC and NO_x emissions from Alternative D.

There is the potential for increased fugitive dust in the air during Alternative D construction activities. However, these impacts would be short term (less than three months) and localized, and dependent on weather conditions during the construction period. Mitigation for construction related air impacts is specified in **Section 5**.

AMBIENT AIR QUALITY STANDARDS

Alternative D is also in compliance with the Clean Air Act with regard to ambient air quality standards. The original DGP air quality analysis, using the 1989 versions of emission factor and dispersion models, substantiates the estimate of impact for Alternative D.

CO MICROSCALE AIR QUALITY ANALYSIS

The year 2000 predicted maximum CO impacts from peak attendance, from the DGP air quality analysis, are lower than those for the year 1990, due to decreasing emissions from newer vehicles. This trend will continue over time, since the major contributor to ambient air quality, CO, and other vehicle emissions, is slow moving entering and exiting vehicles. Because peak traffic levels from the Alternative D gaming facility are lower than those used to design exits and roadways for DGP, worst case ambient air quality impacts from the gaming facility will be less than those from DGP.

4.4.5 ALTERNATIVE E – NO ACTION

Under the No Action Alternative the DGP facility will likely continue to operate essentially as it presently operates and thus would continue to be in compliance with the Clean Air Act. This facility has a non-expiring indirect source air permit that allows peak traffic of 5,432 arriving cars per hour.

An air quality modeling study was conducted by Donahue and Associates (June 1989) as part of the permit approval process. This study was reviewed and approved by the WDNR. A WDNR memorandum from Larry Bruss to Gary Birch in 1989 indicated that both the 1-hour and 8-hour

carbon monoxide (CO) standards would not be exceeded under assumed worst-case operating conditions, as shown in **Table 4.4-5**.

TABLE 4.4-5
PREDICTED YEAR 2000 RESULTS IN PARTS PER MILLION (PPM)

1-hour maximum (ppm)		8-hour maximum (ppm)	
Value	Standard	Value	Standard
24.4	35.0	7.1	9.0

SOURCE: RSV Engineering.

Levels of the other significant vehicle emissions (nitrogen dioxides, or NO₂, and Volatile Organic Compounds, or VOC's) would be less than predicted CO levels, due to lower emission rates for these pollutants. WDNR indicates (Roth, pers. comm., 2005) that the existing Indirect Source Permit issued under WDNR regulations NR 411 continues to be valid for the number of existing parking spaces for the No Action Alternative. This is primarily because subsequent to the issuance of the permit approximately 10 years ago, vehicle emissions have declined and fuel formulations produce fewer emissions due to technological advances.

DGP has reported that the existing facility operates at about one-third or less of the total patronage originally anticipated. Based on this level of business, current air quality impacts are substantially less than projected levels utilized in the air permit evaluation (**Table 4.4-6** and **Table 4.4-7**).

TABLE 4.4-6
ALTERNATIVE E TRAFFIC EMISSIONS (PEAK TONS PER YEAR)

	Peak Daily Vehicles ¹	PM Peak Vehicles	Peak VOC/TPD ²	Peak NOx/TPD ²
Alternative E - No Action (Current DGP)	8,192 ¹	3,047 ¹	0.18 ³	0.61 ³

NOTES: ¹ See Alternative E Trip Generation Summary below. Vehicles equal number of trips divided by two.

² Peak tons per day.

³ Assumes an average travel speed of 55-60 mph and average travel distance in the non-attainment area of 40 miles. Emissions factors were provided by SEWRPC for freeway travel, year 2007.

SOURCE: RSV Engineering, 2005.

Under Alternative E, development of shopping and recreation facilities, and housing and industrial park development in the vicinity of DGP is anticipated to increase in keeping with the mix of development of this corridor targeted by the City of Kenosha (City of Kenosha, 1991).

Increased traffic resulting from these developments will increase mobile source air emission in this area.

TABLE 4.4-7
ALTERNATIVE E TRIP GENERATION SUMMARY¹

	Daily	AM Peak	PM Peak ²
No-Action Alternative	16,384 ³	-----	6,059 ⁴

NOTES: ¹ Two trips equal one vehicle.

² PM peak is the maximum hour between 4-6 PM.

³ Peak daily trips for DGP were developed using the traffic data and assumptions provided in the DGP air quality analysis for the Indirect Source Air Permit Application (Donahue, June, 1989). The assumptions used by Donahue include a peak performance at facility capacity of 17,535 people, 25% arrival by bus, and a car occupancy of 2.3 people/vehicle. For the peak day (Saturdays), a peak attendance (17,535 people) and an average attendance (6,000 people) performance was used with the Donahue arrival (bus/car) and car occupancy rates listed above. For this event, total daily employee vehicles were estimated at 400 cars per day.

⁴ PM peak trips for DGP were based on traffic data and assumptions provided by Donahue (June, 1989). The peak hour was 5,432 cars arriving prior to the capacity attendance evening race event. This peak number assumes that 95% of the patrons arrive during the peak hour. The peak trips include 88 buses arriving and 543 cars departing (employees and patrons) from the matinee race. Departing cars are 10% of arrival, and are based on the departure/arrival ratio determined by RSV Engineering traffic counts collected at DGP 11/8/00.

SOURCE: RSV Engineering.